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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,168	01/18/2002	Tatsuya Kondoh	P21566	7596
7055	7590	09/21/2004	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C.			LEE, JINHEE J	
1950 ROLAND CLARKE PLACE			ART UNIT	
RESTON, VA 20191			PAPER NUMBER	

2831

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/050,168

Applicant(s)

KONDOH ET AL.

Examiner

Jinhee J Lee

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-10, 12-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 is/are allowed.
- 6) ☒ Claim(s) 4, 6-10, 12-15 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 10 and 12 are objected to because of the following informalities:

Claims 10 and 12 were amended, therefore change the designation from "Original" to "Currently Amended".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 4, 6, 9, 10, 12 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Parks et al. (US005239445A).

Re claim 4, Parks et al. discloses a wiring system for interconnecting at least one device connector (100 for example) of at least one first electronic device and at least one second device connector (104 for example) of at least one second electronic device spaced apart from the first electronic device, the wiring system comprising: at least one main harness (150i between 100 and 102 for example) having at least one first group of wires aligned in a substantially parallel direction; at least one sub harness (150i between 102 and 104 for example) having at least one second group of wires, the group of wires having at least one wire crossover formed therein; and a coupling structure (102 for example) configured to couple the main harness and sub harness

together to form a complete wiring harness that extends to interconnect the first and second device connectors, with the wire crossover formed only in the sub harness and with the main harness free of any wire crossovers, wherein the coupling structure comprises a main harness side connector (unnumbered, a side of the pin connector 102 for example) and a sub harness side connector (unnumbered, another side of the pin connector 102 for example) which are mutually engageable with each other, and wherein a plurality of electrical terminals are arranged in the main harness side and sub harness side connectors respectively in such a manner as: (a) to correspond to an electrical terminal arrangement pattern of the first device connector so that the wires of the main harness are aligned in a substantially parallel manner; and (b) not to correspond to an electrical terminal arrangement pattern of the second device connector so that the wires of the sub harness are not aligned in a substantially parallel manner (see figure 4).

Re claim 6, Parks et al. discloses a wiring system, wherein the main harness comprises at least one end connector for connection to the first device connector, and wherein a plurality of electrical terminals are arranged in the at least one end connector in such a manner as to correspond to the electrical terminal arrangement pattern of the first device connector (see figure 4).

Re claim 9, Parks et al. discloses a wiring system comprising: at least one main harness (150i for example between 100 and 102) having at least one group of wires aligned in a substantially parallel direction; at least one sub harness (150i between 102 and 104 for example) having at least one group of wires, the group of wires having at

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least one joint portion (unnumbered at the twisted point); and a coupling structure (102 for example) configured to couple the main and sub harnesses together to form a complete wiring harness that extends to interconnect the first and second device connectors, with the joint portion provided only in the sub harness and with the main harness free of any joint portions, wherein the coupling structure comprises a main harness side connector (unnumbered, a side of the pin connector 102 for example) and a sub harness side connector (unnumbered, another side of the pin connector 102 for example) which are mutually engageable with each other, and wherein a plurality of electrical terminals are arranged in the main harness side and sub harness side connectors respectively in such a manner as: (a) to correspond to an electrical terminal arrangement pattern of the first device connector so that the wires of the main harness are aligned in a substantially parallel manner; and (b) not to correspond to an electrical terminal arrangement pattern of the second device connector so that the wires of the sub harness are not aligned in a substantially parallel manner (see figure 4).

Re claim 10, Parks et al. discloses a wiring system comprising: at least first and second main harnesses (150i for example between 100 and 102) each having at least one group of wires aligned in a substantially parallel direction (see figure 4); at least first and second sub harnesses (150i between 102 and 104 for example) each having at least one group of wires; at least first and second coupling members (102 for example) configured to couple the first and second main harnesses and the first and second sub harnesses together respectively to form at least first and second wiring harnesses that extend to interconnect the first and second device connectors and the first and second

external connectors; wherein the wires of the first and second sub harnesses are configured to extend dispersedly between the first and second device connectors and the first and second coupling members, so that at least one wire crossover is formed, with at least one of the wires of the first sub harness intersecting with at least one of the wires of the second sub harness, whereby the main harnesses are free of any wire crossovers, wherein the first and second main harnesses respectively comprise first and second end connectors (at each pins for example), wherein the first and second coupling members and the first and second end connectors respectively comprise a predetermined terminal arrangement pattern that are respectively configured to correspond to an electrical terminal arrangement pattern of the first and second external connectors, so that the wires of the first and main harness are aligned in a substantially parallel manner (see figure 4).

Re claim 12, Parks et al. discloses a composite wire harness comprising: a main harness (150i for example between 100 and 102) including only a plurality of first wires, all of said first wires aligned substantially parallel with one another; a sub harness (150i between 102 and 104 for example) including a plurality of second wires, at least one of said second wires being a crossover wire; and a connecting device (102 for example) configured to connect said main harness to said sub harness to form said composite wire harness, wherein the connecting device comprises a main harness side connector and a sub harness side connector which are mutually engageable with each other, and wherein a plurality of electrical terminals are arranged in the main harness side and sub harness side connectors respectively in such a manner as: (a) to

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correspond to an electrical terminal arrangement pattern of a first device connector so that said first wires of said main harness remain aligned in a substantially parallel manner; and (b) not to correspond to an electrical terminal arrangement pattern of a second device connector so that said second wires of said sub harness are not aligned in a substantially parallel manner (see figure 4).

Re claim 17, Parks et al. discloses a composite wire harness, wherein said main harness comprises at least one end connector for connection to said first device connector, and wherein a plurality of electrical terminals are arranged in said end connector in such a manner as to correspond to said electrical terminal arrangement pattern of said first device connector (see figure 4).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. in view of Norizuki et al. (US005888103A).

Regarding claim 7, Parks et al. discloses the invention as set forth in claim 4 above with method of mounting leading ends of the wires in pressure contact with an end connector, thereby providing the end connector for connection to the first device connector at one end of the main harness, and mounting the terminal fittings in the main harness side connector, thereby providing the main harness side connector for connection to the sub harness side connector at the other end of the main harness. Parks et al. does not explicitly disclose a method comprising: measuring the wires collectively at the same time; mounting leading ends collectively at the same time; cutting the other ends of the wires collectively at the same time; and crimping the other ends of the wires to terminal fittings. However, Norizuki et al. teaches of a method comprising: mounting leading ends collectively at the same time and crimping the other ends of the wires to terminal fittings (see abstract and figure 1b). The examiner also notes that the method of measuring the wires collectively at the same time and cutting the other ends of the wires collectively at the same time is inherent in the prior art cited, since the applicant points out in the specification that "the wires of the main harness can be measured and cut collectively at the same time" because the "wire crossover is concentrated in the sub harness, so that the main harness is left free of any wire crossovers". This requirement is met the Parks et al.



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7. Claims 8, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al.

Regarding claim 8, Parks et al. discloses the limitations of claim 4 above, but does not specifically disclose that the main harness constitutes approximately 90% - 95% of a total length of the wiring harness, and the sub harness constitutes the remaining portion of the total length of the wiring harness. It would have been an obvious matter of design choice to vary the length of each part of the harness in order to increase or decrease the length of the wires, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 13, Parks et al. above discloses all of the limitations of claim 12 above, but does not specifically disclose that said sub harness is substantially shorter than said main harness. It would have been an obvious matter of design choice to vary the length of each part of the harness, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 14, Parks et al. above discloses all of the limitations of claim 13 above, but does not specifically disclose that said sub harness has a length of approximately 5% to 10% of the length of said composite wire harness. It would have been an obvious matter of design choice to vary the length of each part of the harness,

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since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 15, Parks et al. above discloses all of the limitations of claim 13 above, but does not specifically disclose that said first wires have a length of approximately 2000 mm to 3000 m, and said second wires have a length of approximately 100 mm. It would have been an obvious matter of design choice to vary the length of each part of the harness, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

#### ***Allowable Subject Matter***

8. Claims 1-3 are allowed as indicated in the office action dated June 4, 2003.

#### ***Response to Arguments***

9. Applicant's arguments filed 7/1/04 have been fully considered but they are not persuasive.

In response to applicant's arguments that Parks et al. fails to disclose a main harness connector and a sub harness connector that are mutually engageable, examiner disagrees. The connectors (pins of either side of 100 or 102) are able to mutually engage with each other. According to Merriam-Webster's Collegiate Dictionary tenth edition, "engage" means interlock with, mesh or to cause to mesh.

***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jinhee J Lee whose telephone number is 571-272-1977. The examiner can normally be reached on M, T, Th and F at 6:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jjl

 9/17/04  
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